

X  
3

Attorney's Docket No. MEMC 99-1250 (2441.1)

**DECLARATION AND POWER OF ATTORNEY**

**REGULAR OR DESIGN APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**APPARATUS AND PROCESS FOR THE PREPARATION OF  
LOW-IRON SINGLE CRYSTAL SILICON SUBSTANTIALLY FREE  
OF AGGLOMERATED INTRINSIC POINT DEFECTS**

the specification of which:

(check one)

- is attached hereto
- was filed on November 7, 2001 as Application Serial No. 10/039,459, and was amended on \_\_\_\_\_.
- was described and claimed in PCT International Application No. \_\_\_\_\_, filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_, if any.

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

**PRIORITY CLAIM**

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a) - (d) or §365(b) of any foreign application for patent or inventor's certificate, or §365(a) of any PCT application which designates at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Priority Claimed

(Number)	(Country)	(Day/Month/Year Filed)

Priority Not Claimed

**ANY FOREIGN APPLICATION(S), ON THE SAME SUBJECT MATTER WHICH HAS A FILING DATE EARLIER THAN THE EARLIEST APPLICATION FROM WHICH PRIORITY IS CLAIMED**

(Number)	(Country)	(Day/Month/Year Filed)
----------	-----------	------------------------

**CLAIM FOR BENEFIT OF PROVISIONAL APPLICATION(S)**

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

60/258,296 (Application Number)	12/26/00 (Filing Date)
------------------------------------	---------------------------

(Application Number)	(Filing Date)
----------------------	---------------

**CLAIM FOR BENEFIT OF EARLIER U.S. APPLICATION(S)  
UNDER 35 U.S.C. 120**

(complete this part only if this is a divisional,  
continuation or CIP application)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Serial No.)	(Filing Date)	(Status)
(Serial No.)	(Filing Date)	(Status)

**POWER OF ATTORNEY**

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Irving Powers (15,700), Donald G. Leavitt (17,626), John K. Roedel, Jr. (25,914), Michael E. Godar (28,416), Edward J. Hejlek (31,525), William E. Lahey (26,757), Richard G. Heywood (18,224), Frank R. Agovino (27,416), Kurt F. James (33,716), G. Harley Blosser (33,650), Paul I. J. Fleischut (35,513), Vincent M. Keil (36,838), Robert M. Evans, Jr. (36,794), Robert M. Bain (36,736), Kathleen M. Petrillo (35,076), David E. Crawford, Jr. (38,118), Richard L. Bridge (40,529), Christopher M. Goff (41,785), Derick E. Allen (43,468), Matthew L. Cutler (43,574), Michael G. Munsell (43,820), Karen Y. Hui (44,785), Anthony R. Kinney (44,834), Brian P. Klein (44,837), Sarah J. Chickos (46,157), Donald W. Tuegel (45,424), Steven M. Ritchey (46,321), Michael J. Thomas (39,857), Kathryn J. Doty (40,593), Laura R. Polcyn (47,000), James J. Barta, Jr. (47,409), John M. Bodenhausen (47,432), James E. Davis (47,516), Richard A. Schuth (47,929), Debra D. Nye (48,260), Jennifer E. Cook (P-48,330) and Timothy B. McBride (47,781), all of the law firm of SENNIGER, POWERS, LEAVITT & ROEDEL, One Metropolitan Square, 16th Floor, St. Louis, Missouri 63102.

Send Correspondence To: Direct Telephone Calls To:  
Customer Number: 000321 Steven M. Ritchey  
(314) 231-5400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

-----

Full name of sole or first inventor Hariprasad Sreedharanurthy

Inventor's signature Hariprasad Date 2/1/02

Residence Ballwin, Missouri Citizenship India

Post Office address 501 Pearl Drive, P.O. Box 8  
St. Peters, Missouri 63376

Full name of second joint inventor Mohsen Banan

Second inventor's signature Mohsen Banan Date 2/1/02

Residence Grover, Missouri Citizenship Iran

Post Office address 501 Pearl Drive, P.O. Box 8  
St. Louis, Missouri 63376

Full name of third joint inventor John D. Holder

Inventor's signature John D. Holder Date 2/4/02

Residence Lake St. Louis, Missouri Citizenship US

Post Office address 501 Pearl Drive, P.O. Box 8  
St. Peters, Missouri 63376

ASSIGNMENT

**WHEREAS**, We Hariprasad Sreedharamurthy of Ballwin, Missouri, Mohsen Banan of Grover, Missouri and John D. Holder of Lake St. Louis, Missouri, have invented an improvement in Apparatus and Process for the Preparation of Low-iron Single Crystal Silicon Substantially Free of Agglomerated Intrinsic Point Defects described in a provisional application for a United States patent Serial No. 60/258,296, filed December 26, 2000 (File MEMC 99-1250(2441));

**AND, WHEREAS**, MEMC Electronic Materials, Inc. of St. Peters, Missouri, a corporation of the State of Delaware (hereinafter referred to as "ASSIGNEE") is desirous of acquiring certain rights thereunder;

**NOW, THEREFORE**, for one dollar and other good and valuable consideration, receipt of all of which is hereby acknowledged, we have agreed to and do hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said invention, said United States application, any other United States applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said United States application or in whole or in part on said invention, any foreign applications based in whole or in part on any of the aforesaid United States application or in whole or in part on said invention, and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid applications or on said invention or any part thereof;

**TO BE HELD AND ENJOYED** by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us had no sale and assignment of said interest been made;

AND We hereby authorize and request the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States applications or any of them, or upon said invention or any part thereof, to said ASSIGNEE;

AND We hereby jointly and severally agree for ourselves and for our respective heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances, and any provisional, non-provisional, divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said invention or any part thereof, and in and to said several patents or any of them;

AND We hereby jointly and severally covenant for ourselves and our respective legal representatives that we have granted no right or license to make, use or sell said invention, to anyone except said ASSIGNEE, that prior to the execution of this deed our right, title and interest in said invention had not been otherwise encumbered, and that we have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, we have hereunto set our hands.

  
\_\_\_\_\_  
Hariprasad Sreedharamurthy

  
\_\_\_\_\_  
Mohsen Banan

  
\_\_\_\_\_  
John D. Holder

ACKNOWLEDGEMENT

STATE OF Missouri )  
COUNTY OF St. Charles )

On this 20<sup>th</sup> day of February, 2001, before me, a Notary Public, personally appeared Hariprasad Sreedharamurthy to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

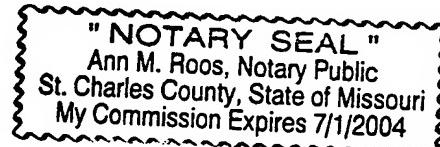
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Ann M. Roos

Notary Public

My Commission Expires:

7/1/04



STATE OF Missouri )  
COUNTY OF St. Charles )

On this 20<sup>th</sup> day of February, 2001, before me, a Notary Public, personally appeared Mohsen Banan to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

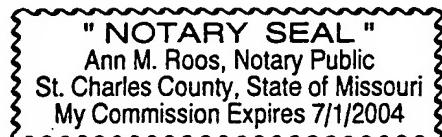
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Ann M. Roos

Notary Public

My Commission Expires:

7/1/04



STATE OF Missouri )

COUNTY OF St. Charles)

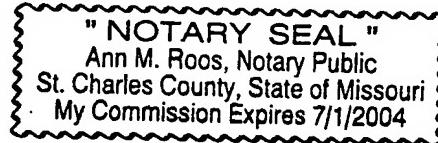
On this 20<sup>th</sup> day of February, 2001, before me, a Notary Public, personally appeared John D. Holder to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Ann M. Roos  
\_\_\_\_\_  
Notary Public

My Commission Expires:

7/1/04





UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MAY 25, 2001

PTAS  
SENNIGER, POWERS, LEAVITT & ROEDEL  
EDWARD J. HEJLEK  
ONE METROPOLITAN SQ., 16TH FLR  
ST LOUIS, MO 63102



\*101648217A\*

TYW/CC 6441

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-302-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/08/2001

REEL/FRAME: 011605/0514

NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
SREEDHARAMURTHY, HARIPRASAD ✓

DOC DATE: 10/29/1999

ASSIGNOR:  
BANAN, MOHSEN ✓

DOC DATE: 02/20/2001

ASSIGNOR:  
HOLDER, JOHN D. ✓

DOC DATE: 02/20/2001

ASSIGNEE:  
MEMC ELECTRONIC MATERIALS, INC.  
501 PEARL DRIVE  
P.O. BOX 8  
ST. PETERS, MISSOURI 63376

SERIAL NUMBER: 60258296 ✓

FILING DATE: 12/26/2000 ✓  
PATENT NUMBER:

ISSUE DATE:

B10

011605/0514 PAGE 2

PAULA MCCRAY, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

03-26-2001



ER SHE

3-861

101648217

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy thereof.

## 1. Name of conveying party(ies) (assignor(s)):

Hariprasad SREEDHARAMURTHY, Mohsen BANAN, John D. HOLDER

MAR 8 2001

Additional name(s) of conveying party(ies) attached?  yes  no

## 2. Name and Address of Party(ies) receiving an interest (assignee(s)):

Name: MEMC Electronic Materials, Inc.

Address: 501 Pearl Drive  
P. O. Box 8

City: St. Peters

State: Missouri Zip: 63376

Country: U.S.A.

Additional name(s) & address(es) attached?  yes  no

## 3. Nature of Conveyance:

 Assignment Merger Change of Name Verified Translation Security Agreement Other \_\_\_\_\_

Execution Date: October 29, 1999

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date(s) of the application is: \_\_\_\_\_

## A. Patent Application No(s).

60/258,296

## B. Patent No(s).

Others on additional sheet(s) attached?  Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Edward J. Hejlek  
 Senniger, Powers, Leavitt & Roedel  
 One Metropolitan Square  
 16th Floor  
 St. Louis, Missouri 63102  
 (314) 231-5400 (telephone)

6. Total number of applications and patents involved:  
Application(s) 1 + Patent(s): 1 = Total 17. Total Fee (37 CFR 3.41) ..... \$ 40.00 Enclosed Authorized to be charged to deposit account8. Deposit Account Number: 19-1345  
(Duplicate copy of this sheet attached) Charge any underpayment or credit any overpayment to  
above Deposit Account

DO NOT USE THIS SPACE

## 9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Edward J. Hejlek  
 Name of Person Signing

Signature

Date

3/5/01

Total number of pages including cover sheet, attachments, and document:

5